

# ABSTRACT

To obtain a selective marker suitable for screening of thermophilic bacteria such as *Thermus thermophilus*. *T. thermophilus* are good research materials for investigating the interrelation between enzyme structures and functions since they are stable at extreme pH, crystallize easily and are easy-to-handle.

To provide a novel kanamycin nucleotidyltransferase with markedly improved thermostability, a selective marker using the same, and a screening method for thermophilic bacteria such as *Thermus thermophilus* using said selective marker.